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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,233	08/22/2003	Christopher M. Paterson	20501/524	1380

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THE OLLILA LAW GROUP LLC
2060 BROADWAY
SUITE 300
BOULDER, CO 80302

EXAMINER

GRAHAM, GARY K

ART UNIT

PAPER NUMBER

1744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/646,233	Applicant(s) PATERSON ET AL.	
	Examiner Gary K. Graham	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-21 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) 7,9-14,21 and 23-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 6, 15-17 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Krasznai et al (US patent 4,912,805) in view of Stubbs (GB patent 2,041,741).

The patent to Krasznai discloses the invention, a vacuum cleaner brushroll, substantially as is claimed. Krasznai discloses (see figs. 3,4) a brushroll body (65) with at least one row (76) of bristle tufts. The row of tufts is comprised of both short, stiff bristle tufts (70b) and long, flexible bristle tufts (70a). The short tufts have fewer bristles than the long tufts (col.2, lines 1+). The tufts have different diameters (col. 5, lines 40+).

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The patent to Krasznai discloses all of the above recited subject matter with the exception of the different tufts (short, long) being at first and second angles with respect to a radius direction of the brushroll body.

The patent to Stubbs discloses angling of bristle tufts (2, figs.3,4a) with respect to a radius direction of the brushroll body (3). Such angling is to increase the dust collecting property of the brush by causing a flick action of the tufts. Stubbs sets forth that the angle chosen is in the range of 1-6 degrees and is determined by bristle material and tuft length. Thus tufts of different lengths will have different angles.

It would have been obvious to one of skill in the art to angle the tufts of Krasznai, as clearly suggested by Stubbs, to increase the dust collecting property of the brush by causing a flick action of the tufts. It should also be noted that claims 1 and 15 do not set forth that the first and second angles are different. Each being oriented at an angle. Angling of the tufts of Krasznai will result in all the tufts being angled with respect to the brushroll body. **Further**, as Krasznai discloses tufts of differing lengths, such will have differing angles, as suggested by Stubbs, such that they achieve the proper flick action.

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Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krasznai et al (US patent 4,912,805) in view of Stubbs (GB patent 2,041,741), as applied to claims 1 and 15 above, and further in view of Taylor (US patent 2,459,007).

The patents to Krasznai and Stubbs disclose all of the above recited subject matter with the exception of the different length tufts being made of different material.

The patent to Taylor discloses a vacuum brush roll (fig.2) with both long, flexible tufts (19) and short, stiff tufts (18). Taylor discloses that differences in tuft flexibility can be achieved with different diameter bristles and/or different materials (see col. 2, lines 53+).

It would have been obvious to one of skill in the art to use different material to achieve the differences in flexibility for the bristles of Krasznai instead of or in addition to the different diameter bristles, as clearly suggested by Taylor, to enable increased control of the flexibility of the bristles. Such would also enable same size tufts to be used for both tufts thus providing a uniform row of tufts.

Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krasznai et al (US patent 4,912,805) in view of Stubbs (GB patent 2,041,741), as applied to claims 1 and 15 and further in view of Newman (US patent 3,188,673).

The patents to Krasznai and Stubbs disclose all of the above recited subject matter with the exception of different length tufts being of different colors.

The patent to Newman discloses a brush wherein different length tufts are of different colors.

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It would have been obvious to one of skill in the art to make the different length tufts of different colors, as clearly suggested by Newman, to enable increased awareness of the different length tufts. Further, merely coloring different components of a structure different colors appears entirely obvious as a purely ascetic change.

Response to Arguments

Applicant's arguments with respect to claims 1 and 15 have been considered but are moot in view of the new ground(s) of rejection. As set forth above, Stubbs suggests angling of tufts of a vacuum brush roll to enable a flick action of the tufts to enhance cleaning. Stubbs also sets forth that the particular angle selected is determined by, for example, tuft length. As the adjacent tufts in Krasznai are of different lengths, it appears they will have different angling to achieve the proper flick action, as suggested by Stubbs. Thus modification of Krasznai as suggested by Stubbs will result in the brushroll as claimed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary K. Graham whose telephone number is 571-272-1274. The examiner can normally be reached on Tuesday to Friday (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys J. Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Gary K. Graham', is written over a horizontal line.

Gary K Graham
Primary Examiner
Art Unit 1744

GKG
19 February 2007